

Completion of the EM mission at Oak Ridge Operations Office, as scheduled, will depend on the timely accomplishment of critical activities and milestones. Sites have assigned programmatic risk scores to each of the critical activities/milestones. Appendix D provides a complete definition of programmatic risk. Exhibit E-36 presents a summary of activities/milestones on the critical closure path that have high programmatic risk (programmatic risk scores of 4 or 5 in any category). For cleanup activities, the major uncertainties are in the definition of work scope. Cleanup actions are assumed and may change after the approval of decision documents. For certain waste management activities, disposal location is uncertain which results in a high programmatic risk score. The high programmatic risk will decrease after the disposal agreements are reached. The Oak Ridge Operations Office version of *Paths to Closure* provides more details on the management approach for these high programmatic risk issues.

**Exhibit E-36**  
**Summary of High Programmatic Risk Activities/Milestones:**  
**Oak Ridge Operations Office**

Site	Project, Activity, Event	Start/End Dates	Programmatic Risk Categories		
			Technological	Work Scope Definition	Intersite Dependency
ORR	Record of Decision (ROD) for contaminated areas in the ORNL Melton Valley within the Melton Valley Watershed	Oct 96/ Jun 98	2	5	1
	Bear Creek Valley ROD for multiple contaminant sources, groundwater & surface water west of the Y-12 Plant	Oct 96/ Oct 98	2	5	1
	Bethel Valley ROD for contaminated areas in the Bethel Valley Watershed	Oct 96/ Apr 99	2	5	1
	ETTP ROD for contaminated areas, groundwater and surface water	Oct 96/ May 00	2	5	1
	UEFPC ROD for multiple contaminant sources and commingled surface and groundwater	Oct 96/ Feb 00	2	5	1
	Construction of Environmental Management Waste Management Disposal Facility	Oct 98/ Sep 00	2	5	1
	Bear Creek Valley Boneyard/ Burnyard	Oct 98/ Sep 03	2	5	1

**Exhibit E-36 (Continued)**  
**Summary of High Programmatic Risk Activities/Milestones:**  
**Oak Ridge Operations Office**

Site	Project, Activity, Event	Start/End Dates	Programmatic Risk Categories		
			Technological	Work Scope Definition	Intersite Dependency
	SWSA 5 North and South Remediation	Oct 99/ Sep 04	2	5	1
	K-25/27/29 Building Demolition	Oct 04/ Oct 09	2	5	1
	Bear Creek Valley Groundwater Remediation	Oct 05/ Sep 10	2	5	1
	UEFPC Soil Remediation	Oct 02/ Sep 10	2	5	1
	Disposition of legacy LLW/	Sep 98/ Sep 13	2	3	5
	White Oak Creek Remediation	Oct 04/ Sep 13	2	5	1
Paducah	Complete Sources of Off-Site Contamination	Jan 99/ Sep 03	1	5	1
	Complete site evaluations of low risk WAGS (WAG 30), 8 release sites	Oct 96/ Sep 04	1	5	1
	Cleanup groundwater and surface water units	Oct 03/ Sep 10	2	5	1

## E.7 Oakland Operations Office Summary

The Oakland Operations Office oversees a wide range of programs and nine sites throughout California and one in New York State. Oakland's mission is to manage risks at these multiple research facilities which are contaminated with various hazardous and radioactive materials. The Office of Environmental Management (EM) activities at each of these sites vary. However, Oakland plans to have all EM missions completed at all sites (excluding the Separations Process Research Unit) by 2006. After the EM mission is complete, most sites have ongoing research missions that will be managed by the owner, however, the decision regarding the management of newly-generated waste is still pending.



**Energy Technology Engineering Center (ETEC)** is located in the Simi Hills of Ventura County, approximately 30 miles northwest of downtown Los Angeles. The Energy Technology Engineering Center consists of government-owned buildings that occupy 90 acres owned by Boeing North American, Rocketdyne Division on the Santa Susana Field Laboratory. ETEC was established in the mid-1960s as a Department of Energy (DOE) laboratory to support nuclear research and energy development projects. All nuclear-related research ended by 1989. Office of Nuclear Energy activities at ETEC were terminated at the end of 1995. At ETEC the EM cleanup mission is focused primarily on remediating contaminated groundwater and soils in addition to the decontamination and decommissioning (D&D) of several buildings.

**General Atomics (GA)** occupies two contiguous sites that are located approximately 13 miles north of downtown San Diego. The overall mission of the EM program at General Atomics is the decontamination and demolition of the Hot Cell Facility. The Hot Cell Facility, which General Atomics owns and operates, has

been used for numerous post-irradiation examinations of Department fuels, structural materials, reactor dosimetry materials, and instrumentation.

**General Electric Vallecitos Nuclear Center (GE)** is a privately-owned commercial site where past DOE operations have been performed. Past DOE fuel examination activities were responsible for contaminating the General Electric Vallecitos Nuclear Center high-level Hot Cell #4 and the Emissions Spectrograph (Glovebox). EM activities at the General Electric Vallecitos Nuclear Center are limited to the cleanup of these two areas.

The cleanup mission at the **Geothermal Test Facility (GTF)** was completed in the first quarter of FY 1997.

**Laboratory for Energy-Related Health Research (LEHR)** is an inactive research facility where, for a period of 30 years, DOE and its predecessors funded radiation-related studies using animals. The research program, concluded in 1988, was conducted by the University of California at Davis (UCD). In 1990, DOE initiated site restoration activities with emphasis on facility decontamination and the removal of high risk radioactive sources. In 1994, the LEHR site, along with the UCD landfills and burial trenches, were added to the U.S. Environmental Protection Agency's National Priority List. Under the terms of an agreement between DOE and the University, DOE is responsible for the remediation of contaminated areas including domestic and septic tanks, burial trenches, dry wells, underground waste treatment facilities, leach fields, and about four acres of outside dog pen facilities.

**Lawrence Berkeley National Laboratory (LBNL)** occupies 134 acres adjacent to the Berkeley Campus of the University of California. In the early 1930s, the University of California leased land to DOE for construction of the Lawrence Berkeley National Laboratory where DOE conducted numerous research activities. Buildings were constructed for a wide variety of energy-related research activities, including nuclear and high-energy physics, accelerator research and development, materials research, geology, molecular biology, and biomedical research. EM activities at LBNL involve remediation of soil and groundwater contamination produced by those activities.

**Lawrence Livermore National Laboratory (LLNL)** is composed of two sites, the Main Site and Site 300, both located approximately 50 miles east of San Francisco. DOE and the University of California jointly operate both sites. The Livermore Main Site was converted from agricultural use by the U.S. Navy in 1942 as a flight training base and for aircraft assembly, repair, and overhaul. In 1952 the site was transferred to the Atomic Energy Commission (AEC). Under AEC, the site became a weapons design and basic physics laboratory and continues with this mission under DOE today. Initial releases of hazardous materials occurred at the Livermore Site in the 1940s when the site was a Naval Air Station. There is also evidence that localized spills, leaking tanks, and impoundments and landfills contributed volatile organic compounds (VOCs), fuel hydrocarbons (FHCs), metals, and tritium to groundwater and unsaturated sediments after the Navy

era. The LLNL Main Site was added to the EPA's National Priority List (NPL) in 1987. The purpose of this project is to characterize existing contamination and to effectively remediate soil and groundwater.

Site 300 was placed on the NPL in 1990 principally because of high concentrations of trichloroethylene (TCE) in groundwater and two off-site TCE groundwater plumes. A Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Federal Facility Agreement was negotiated between DOE/LLNL, EPA, the State Department of Toxic Substances Control, and the California Central Valley Regional Water Quality Control Board in 1992 for Site 300 and in 1998 for the Main Site.

**Separations Process Research Unit (SPRU)**, located at the Knolls Site of the Knolls Atomic Power Laboratory (KAPL) near Schenectady, New York, is an inactive complex requiring decontamination and decommissioning. SPRU was a pilot plant used for developing the redox and purex processes for extracting both uranium and plutonium from irradiated fuel. As a result of this work conducted by the Materials Production Division of the AEC in the early 1950s, associated buildings and the surrounding ground became contaminated. The complex, in standby status since 1953, has been accepted into the EM program for decontamination and decommissioning of contaminated facilities and remediation of contaminated soils. Until such decommissioning activities begin, a surveillance and monitoring program is in place to ensure that the facility remains in a stable condition and that it does not present an unacceptable risk to the public, the environment, or the on-site work force.

**Stanford Linear Accelerator Center (SLAC)** is a high-energy research facility, established in 1962, which is owned and operated by Stanford University under contract to DOE. The Center's four major experimental facilities are the Linear Accelerator, the Positron Electron Project Storage Ring, the Stanford Positron Electron Asymmetric Ring, and the Stanford Linear Accelerator Center Linear Collider. The primary objective of SLAC's EM program is to clean up contaminated soils and groundwater and to return the land to the site landlord, the Office of Energy Research, by the end of FY 2000 for beneficial use.

#### *E.7.1 End State*

Exhibit E-37 provides a summary of the anticipated end states for the Oakland Operations Office sites.